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Docket No. 56770US035

Amendments to the Claims

A detailed list of all claims under examination is shown below. Please amend claims 10, 11, 14, 15 and 20 as shown below in marked form:

1. (withdrawn): A barrier sheet, comprising:
 - a thermoplastic substrate; and
 - a transparent barrier film disposed on the substrate, the transparent barrier film comprising:
 - a smoothing layer disposed on the substrate; and
 - a first layer of oxygen barrier material covering the smoothing layer.
2. (withdrawn): The sheet of claim 1, wherein the smoothing layer is a first crosslinked acrylate layer.
3. (withdrawn): The sheet of claim 2, wherein the first crosslinked acrylate layer is a polymerization product of acrylate monomer having a molecular weight in the range from 150 to 600.
4. (withdrawn): The sheet of claim 2, wherein the transparent barrier film further comprises:
 - a second crosslinked acrylate layer disposed on the first layer of oxygen barrier material.
5. (withdrawn): The sheet of claim 4, wherein the transparent barrier film further comprises:
 - a second layer of oxygen barrier material disposed on the second crosslinked acrylate layer; and
 - a third crosslinked acrylate layer disposed on the second layer of oxygen barrier material.
6. (withdrawn): The sheet of claim 1, wherein the oxygen barrier material comprises a transparent oxide.
7. (withdrawn): The sheet of claim 6, wherein the oxygen barrier material comprises SiO_x .

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8. (withdrawn): The sheet of claim 6, wherein the oxygen barrier material comprises aluminum oxide.
9. (withdrawn): A package, comprising the barrier sheet of claim 1.
10. (currently amended): A method of making a barrier sheet, comprising:
 - providing a thermoplastic sheet substrate; and
 - forming a transparent barrier film on the substrate, the forming step including:
 - applying an acrylate smoothing layer to the thermoplastic substrate to reduce the substrate surface roughness;
 - applying a layer of transparent oxide oxygen barrier material to the smoothing layer; and
 - applying a protective layer to the oxygen barrier material by chilling the thermoplastic substrate and condensing and crosslinking an acrylate monomer composition on the oxygen barrier material, to reduce the barrier sheet oxygen permeability.
11. (currently amended): The method of claim 10, wherein the step of applying a smoothing layer comprises applying chilling the thermoplastic substrate and condensing and crosslinking an acrylate monomer composition to on the thermoplastic substrate and crosslinking the acrylate monomer composition.
12. (original): The method of claim 11, wherein the acrylate monomer composition is applied to the thermoplastic substrate by flash evaporation.

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13. (previously presented): The method of claim 11, wherein the step of applying a smoothing layer forms a first crosslinked acrylate layer on the thermoplastic substrate, the step of applying a protective layer to the oxygen barrier material forms a second crosslinked acrylate layer on the first layer of transparent oxide oxygen barrier material, and wherein the step of forming a transparent barrier film further includes:

forming a second layer of oxygen barrier material on the second crosslinked acrylate layer; and

forming a third crosslinked acrylate layer on the second layer of oxygen barrier material.

14. (currently amended): The method of claim 10, wherein the step of applying a protective layer comprises:

applying an acrylate protective layer monomer composition to the oxygen barrier material by flash evaporation.

15. (currently amended): The method of claim 14, wherein the step of applying a protective layer comprises applying an acrylate monomer composition to the oxygen barrier material and crosslinking the acrylate monomer composition using an ultraviolet or electron beam source.

16. (original): The method of claim 10, wherein the forming step is carried out in a vacuum chamber.

17. (previously presented): The method of claim 10, wherein the oxygen barrier material is applied to the smoothing layer by sputtering.

18. (previously presented): The method of claim 10, wherein the oxygen barrier material is applied to the smoothing layer by plasma enhanced chemical vapor deposition.

19. (original): The method of claim 10, wherein the thermoplastic substrate is a roll of sheet material.

20. (currently amended): The method of claim 10, wherein the smoothing layer is cured and further comprising plasma treating the cured smoothing layer with a reactive plasma before applying the transparent oxide oxygen barrier material.

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21. (previously presented): The method of claim 10, comprising applying multiple oxygen barrier layers.